

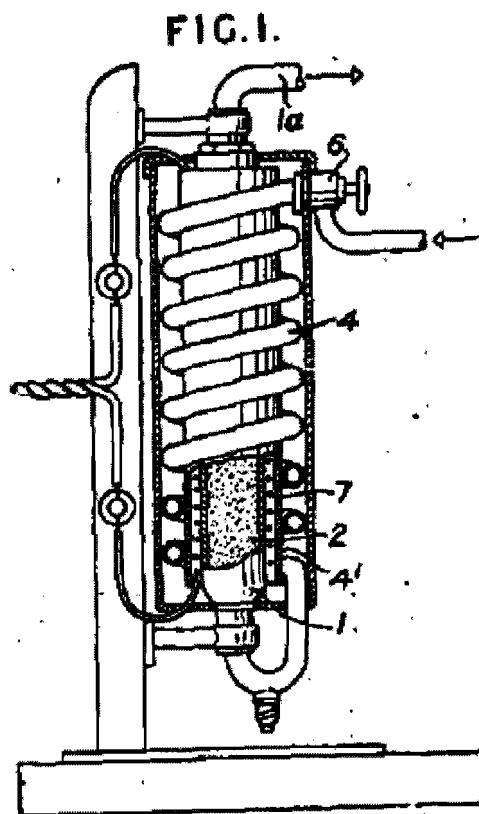
## Apparatus for producing hydrogen gas

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**Inventor:**  
**Applicant:** EUGENE MICHIELS  
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### Abstract of GB723180

<PICT:0723180/III/1> Apparatus for producing hydrogen is of the type comprising a housing, a vapourizing chamber, and a tubular reaction chamber containing a reagent capable of reducing steam to hydrogen type comprising a housing, vaporizing chamber both chambers being arranged in said housing, means for feeding water to said vaporizing chamber and means for simultaneously heating both chambers; wherein said vaporizing chamber comprises a helical tube wound about said tubular reaction chamber and is connected at its end remote from its connection with the reaction chamber with an atomizer for supplying water thereto under pressure. As shown in Fig. 1, the water is introduced into the vaporizing tube 4 through atomizer 6 and passes over iron filings or other reagent, 2, in the reaction chamber 1. Hydrogen emerges from tube 1a and may be fed directly to the carburettor of an internal combustion engine. The apparatus may be heated electrically by the resistance coil 7 which is wound round the reaction tube between the latter and the vaporizing chamber which is preferably in thermal contact with a sheath 41 of thermally conducting material. Alternatively the waste heat of an internal combustion engine may be utilized, for example, by disposing the apparatus in the exhaust manifold of the engine Fig. 2 (not shown).



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